

$Q_1$  = Heat flow,  
fire to fire tube

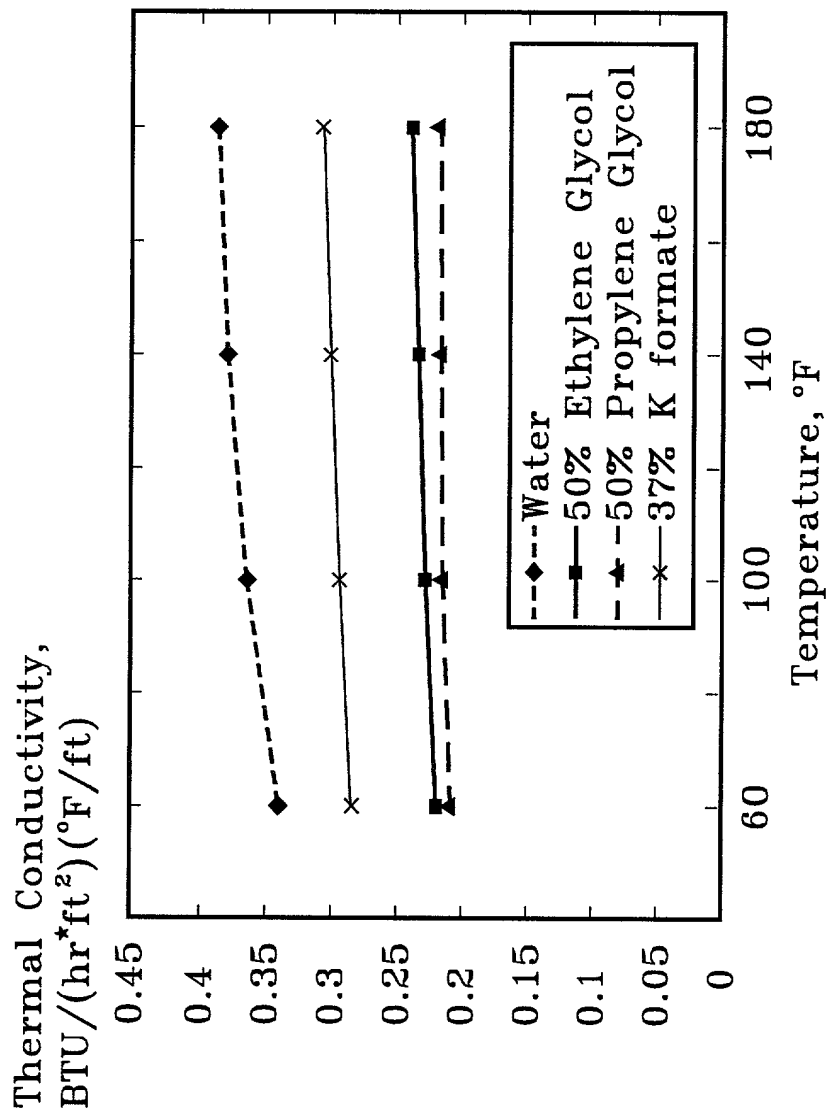
$Q_2$  = Heat flow,  
fire tube to fluid

$Q_3$  = Heat flow,  
across fluid

$Q_4$  = Heat flow,  
fluid to process coil

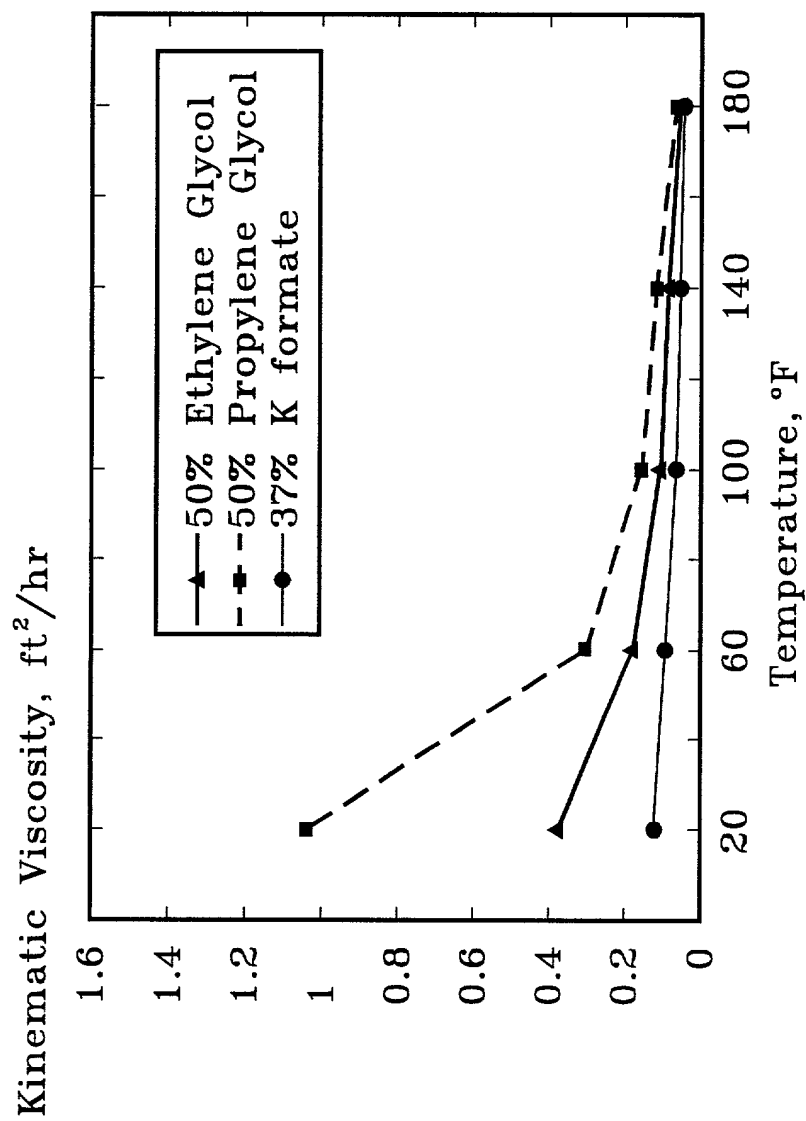
$Q_5$  = Heat flow,  
process coil to gas

Fig.2



Comparison of the thermal conductivities of water, glycols, and potassium formate solution.

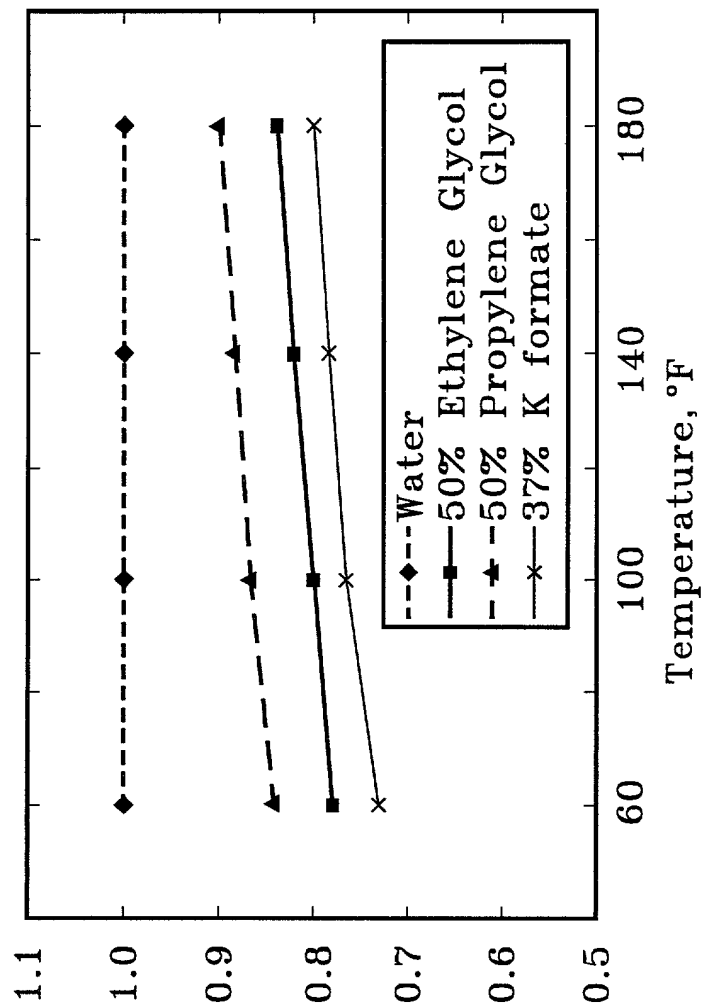
Fig.3



Comparison of the kinematic viscosities of glycol solutions and potassium formate solution.

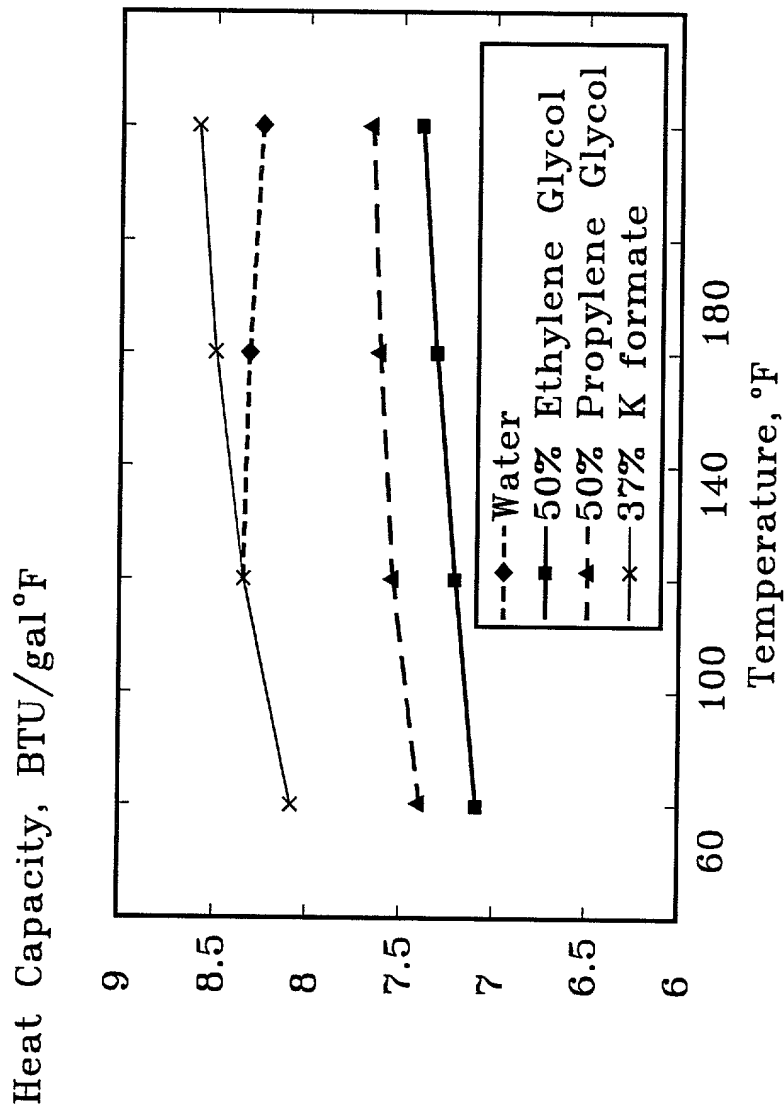
Fig.4

Specific Heat Capacity, BTU/lb.°F



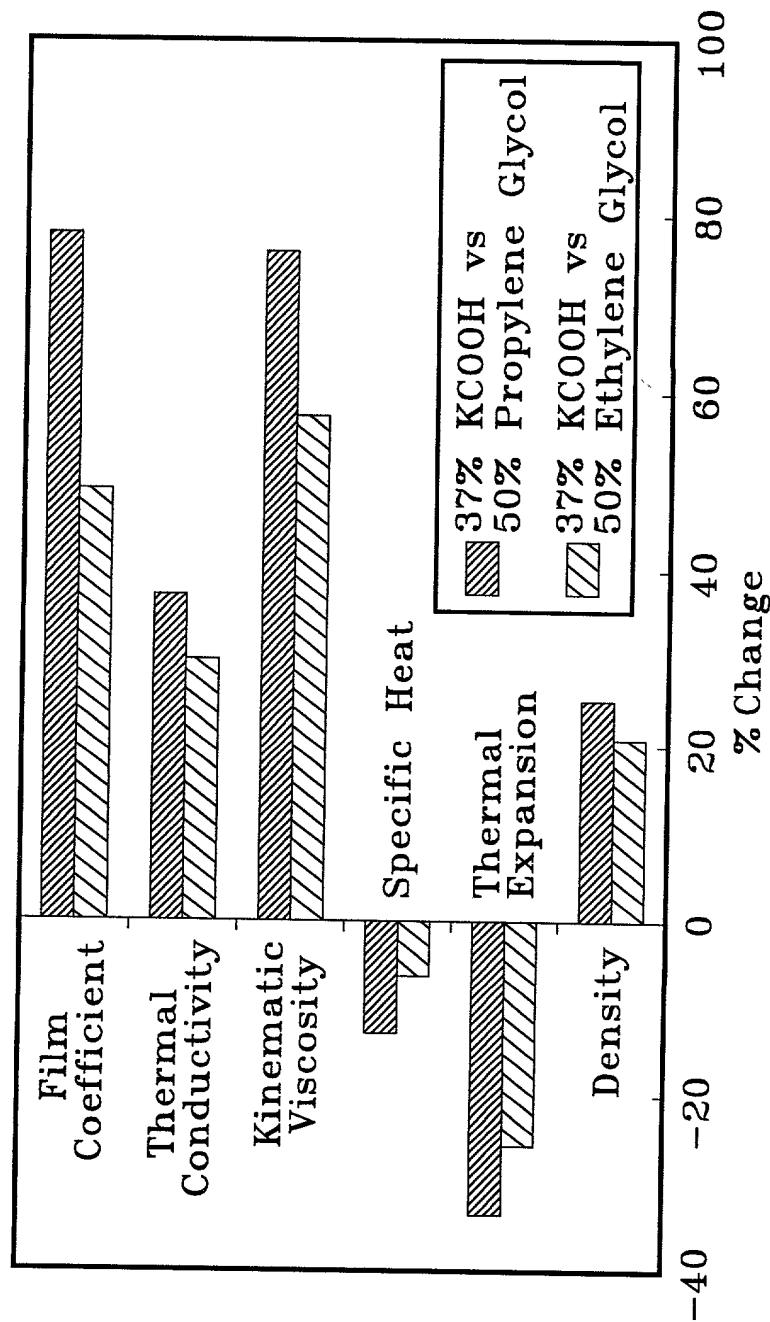
Comparison of the specific heat capacities of glycol solutions and water with potassium formate solution.

Fig. 5



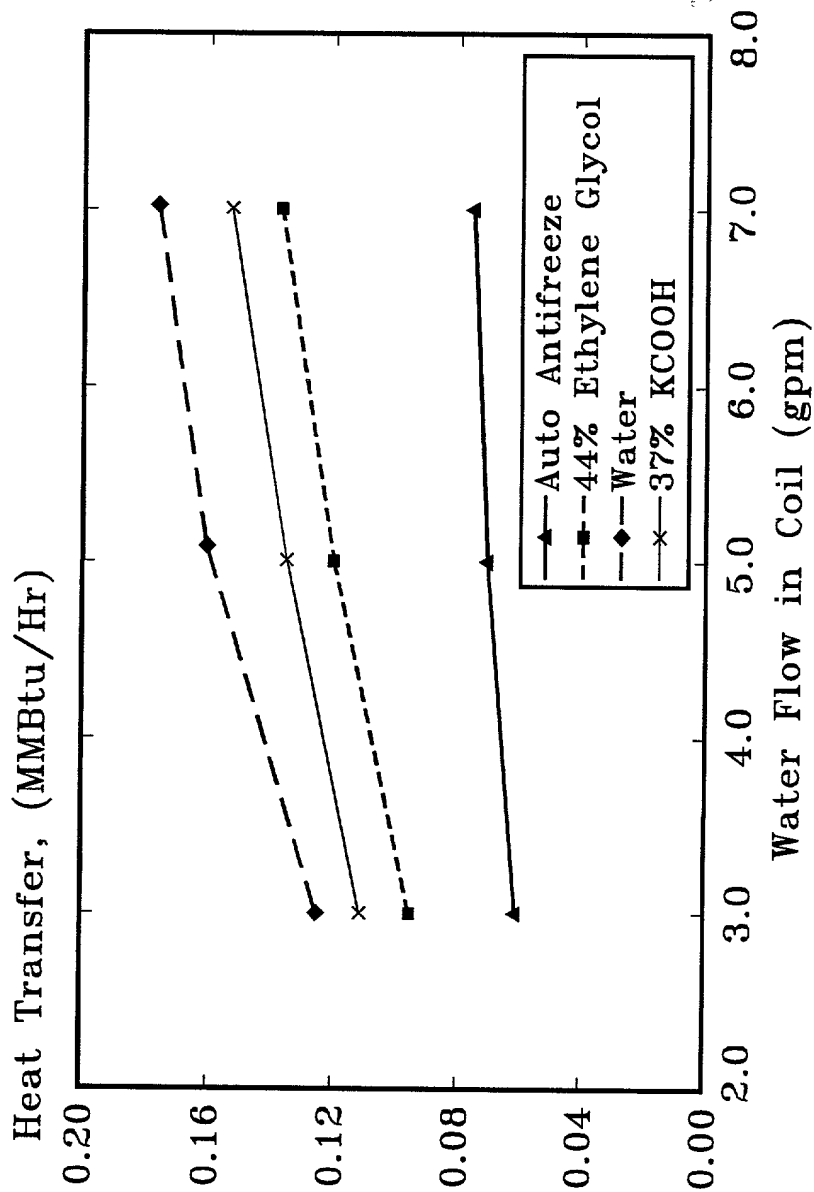
Comparison of volume-based heat capacity of glycols, water and potassium formate solution.

Fig. 6



Comparison of thermophysical parameters and film coefficients between glycol solutions and potassium formate solutions, showing the improvement in heat transfer from the new fluid.

Fig.7



Overall heat transfer in electric line heater test, comparing potassium formate solution with water and glycol solutions.

Fig.8